Title of Instructional Materials: Connected Mathematics

Grade Level: Grade 8

Summary of Connected Mathematics

Overall Rating:	⊠ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	Important Mathematical Ideas:	Weak (1-2)Moderate (2-3)Strong (3-4)
the Common Core standards. It's proportions. They claim to have a	ll-developed and doesn't meet all very weak in ratios, percent, and a Common Core toolkit, but it was nittee. The standards that are met deep understanding. There are tenough practice for students to	Summary / Justification / Evide	nce:
Skills and Procedures:	⊠ Weak (1-2) ☐ Moderate (2-3) ☐ Strong (3-4)	Mathematical Relationships:	Weak (1-2)Moderate (2-3)Strong (3-4)
Summary / Justification / Evide	ence:	Summary / Justification / Evide	nce:



Course 3

Instructional Materials Analysis and Selection

Phase 3: Assessing Content Alignment to the Common Core State Standards for Mathematics

Grade 8



a project of The Charles A. Dana Center at the University of Texas at Austin

Instructional Materials Analysis and Selection

Assessing Content Alignment to the Common Core State Standards for Mathematics

Indiana Education Roundtable, The Indiana Department of Education,

The Charles A. Dana Center at The University of Texas at Austin

2010-2011

Instructional Materials Analysis and Selection Assessing Content Alignment to the Common Core State Standards for Mathematics

This tool provides educators with a structured way to make informed decisions when selecting mathematics instructional materials. In particular, it can help you become more knowledgeable about the Common Core State Standards for Mathematics so you can select instructional materials aligned with these standards.

This resource can also be used with the Dana Center's larger 4-phase Instructional Materials Analysis and Selection toolset: Phase 1: Studying the Standards, Phase 2: Narrowing the Field of Instructional Materials, Phase 3: Assessing Subject-Area Content Alignment, and Phase 4: Assessing Vertical Alignment of Instructional Materials. The particular resource you hold is a phase 3 tool that has been customized for assessing the alignment of instructional materials with the Common Core State Standards for Mathematics. Note that in 2009, the Dana Center developed a similar tool for Indiana educators to use in analyzing the alignment of instructional materials to Indiana's Academic Standards for Mathematics.

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www.utdanacenter.org

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About the development of this resource

This tool, Instructional Materials Analysis and Selection: Assessing Content Alignment to the Common Core State Standards for Mathematics, draws on the Dana Center's nearly 20 years of experience in strengthening education and has been used extensively in Texas and, increasingly, other states, to help local school districts and schools select instructional materials aligned with their standards. Development and production of the Instructional Materials Analysis toolset

This resource consists of a set of 15 individual grade-level / course documents that span kindergarten through the third year of high school mathematics. There is a document for each grade from kindergarten through 8, and six documents for high school mathematics (one each for the three courses in the traditional high school pathway Algebra I, Geometry, Algebra II; and one each for the three courses in the integrated high school pathway Mathematics II, Mathematics II, and Mathematics III).* At the request of various states and other entities, the Dana Center has populated this Instructional Materials Analysis and Selection tool with standards from the Common Core State Standards for Mathematics for use by local districts in selecting instructional materials aligned with these standards.

Note that the copyright of the Common Core State Standards for Mathematics is held by the National Governors Association Center for Best Practices and the Council of Chief State School Officers (collectively, NGA Center/CCSSO). This use of the CCSS for Mathematics is done under the CCSS Terms of Use, available at www.corestandards.org/terms-of-use. Specifically, this work is done under the Terms of Use "non-exclusive, royalty-free license to copy, publish, distribute, and display the Common Core State Standards for non-commercial purposes that support the Common Core State Standards Initiative." For a complete copy of the Common Core State Standards for Mathematics as well as the CCSS for Mathematics, Appendix A: Designing high school mathematics courses based on the Common Core State Standards, go to www.corestandards.org/the-standards.

We welcome your comments and suggestions for improvements—please send to dana-txshop@utlists.utexas.edu or the address in the copyright section above.

About the Charles A. Dana Center at The University of Texas at Austin

The Dana Center works to raise student achievement in K-16 mathematics and science, especially for historically underserved populations. We do so by providing direct service to school districts and institutions of higher education; to local, state, and national education leaders; and to agencies, nonprofits, and professional organizations concerned with strengthening American education.

The Center was founded in 1991 at The University of Texas at Austin. We carry out our work by supporting high standards and building system capacity; collaborating with key state and national organizations to address emerging issues; creating and delivering professional supports for educators and education leaders; and writing and publishing education resources, including student supports. Our staff of more than 60 has worked with dozens of school systems in nearly 20 states and with 90 percent of Texas's more than 1,000 school districts. We are committed to ensuring that the accident of where a child attends school does not limit the academic opportunities he or she can pursue.

For more information about our programs and resources, see our homepage at www.utdanacenter.org. To access our resources (many of them free), see our products index at www.utdanacenter.org/products. And to learn more about our professional development—and sign up online—go to www.utdanacenter.org/pd.

^{*} For the high school course sequences, we relied on the Common Core State Standards Mathematics Appendix A: Designing High School Mathematics Courses Based on the Common Core State Standards, developed for the CCSS initiative by Achieve, Inc., which convened and managed the Achieve Pathways Group.

Acknowledgments

Unless otherwise noted, all staff listed here are affiliated with the Dana Center.

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Our thanks

We gratefully acknowledge the more than 100 school districts and thousands of educators who have informed the development of these resources.

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and print production manager
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Introduction

Studying the Standards Phase 1:

Narrowing the Field of Instructional Materials Phase 2:

Assessing Mathematical Content Alignment Phase 3:

The purpose of Phase 3: Assessing Mathematical Content Alignment is to determine the degree to which the materials are aligned to the standards (content and processes). In Phase 3, participants conduct an in-depth review of the 2-3 instructional materials selected in Phase 2. The Phase 3 process requires selection committee members to use set criteria in order to determine a rating for each sample, to cite examples to justify their score for each sample, and to document standards that are missing or not well-developed in the instructional materials examined.

Implementation

As a whole group, selection committee members should practice applying the Phase 3 rubric. The purpose of the whole group practice is to promote inter-rater reliability and calibration.

In Phase 3 it is not important to analyze every page, section, or chapter of a resource. It is important to identify an area, topic, or big idea for the deep content analysis of Phase 3 (e.g. development of equivalent fractions, addition of whole numbers, development of proportionality...). The identified area, topic, or big idea will be used for all the instructional materials considered in Phase 3. The area, topic, or big idea can be identified through the use of student achievement data, curriculum priorities/challenges, or ideas that typically make up a greater portion of instruction in particular grade levels/courses. In most cases, Phase 3 will identify the one resource that is best aligned.

Step-by-Step Instructions

- Use your current adoption to practice using the Phase 3 rubric. Select one big idea to focus your analysis (see note above for selecting the 1. area, topic, or big idea).
- Independently, committee members use their current resource, the identified big idea (and associated pages in that resource), and the Phase 3 rubric to score and document the extent to which the material (content and processes) aligns to the standards. 2.
- In small groups, committee members share their scoring and justifications. Small groups come to consensus on how the current resource 3. would score on this big idea.
- Each small group shares with the large group their score. Repeat the consensus building to generate a large group score on this big idea. 4.
- Clarify any misunderstandings about how to apply the rubric before committee members begin to use Phase 3 rubric on the selected 5. materials.

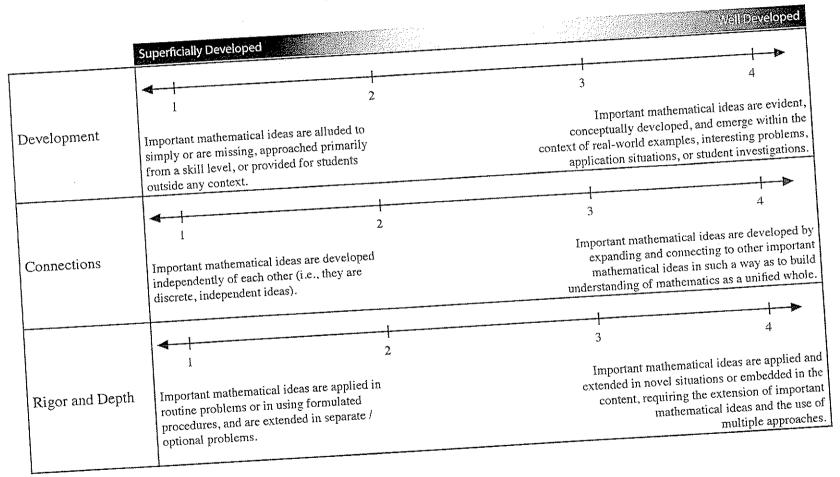
- Based on the size of the selection committee, determine the number of areas, topics, or big ideas to be examined for each grade/course. If the group size is large, more areas, topics, big ideas can be examined within each grade level/course. 6.
- Make sure committee members have multiple copies of the Phase 3 rubric. 7.
- Committee members apply the Phase 3 rubric for each of the materials. 8.
- Establish a time line for groups to complete and submit Phase 3 documentation. 9.
- Establish a data collection and analysis process to attain a rating for each resource. 10.

Materials and Supplies

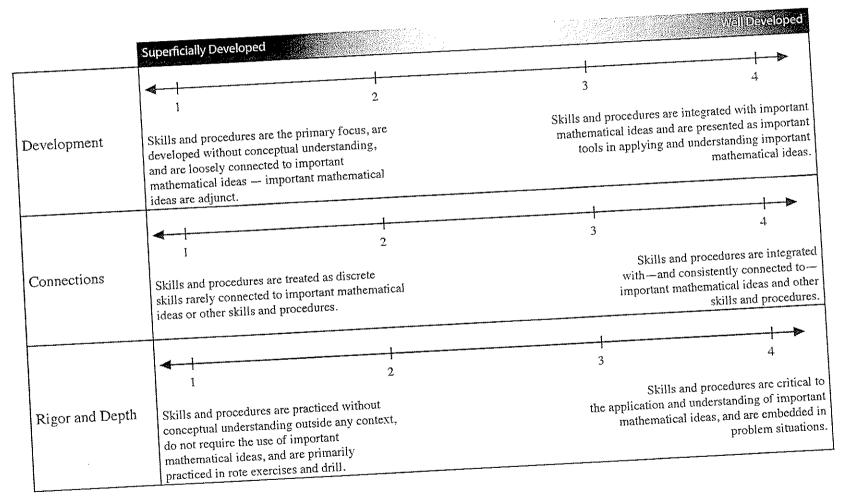
- Phase 3: Assessing Mathematical Content Alignment black line master multiple copies per person
- Currently used instructional resource
- The 2 to 4 instructional materials selected in Phase 2

Assessing Vertical Alignment of Instructional Materials Phase 4:

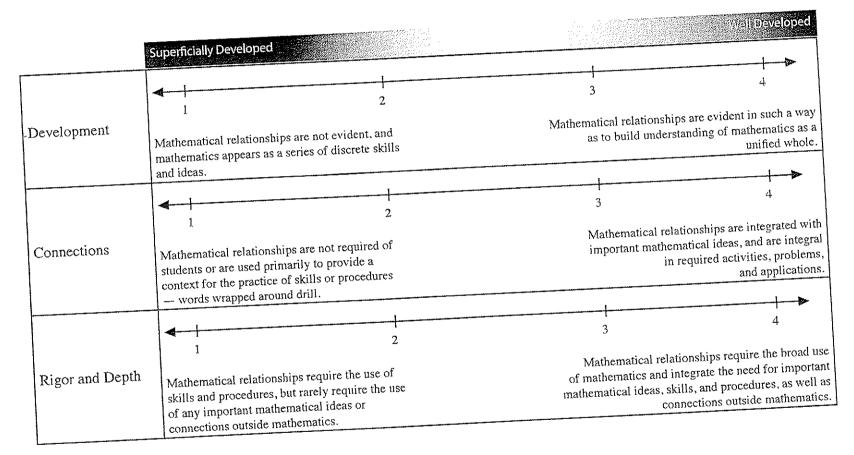
Important Mathematical Ideas: Understanding the scoring



Skills and Procedures: Understanding the scoring



Mathematical Relationships: Understanding the scoring



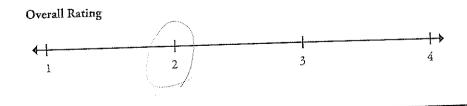
Reviewed By:	
Title of Instructional Materials:	

1. Make sense of problems and persevere in solving them.

Mathematically proficient students start by explaining to themselves the meaning of a problem and looking for entry points to its solution. They analyze givens, constraints, relationships, and goals. They make conjectures about the form and meaning of the solution and plan a solution pathway rather than simply jumping into a solution attempt. They consider analogous problems, and try special cases and simpler forms of the original problem in order to gain insight into its solution. They monitor and evaluate their progress and change course if necessary. Older students might, depending on the context of the problem, transform algebraic expressions or change the viewing window on their graphing calculator to get the information they need. Mathematically proficient students can explain correspondences between equations, verbal descriptions, tables, and graphs or draw diagrams of important features and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and relationships, graph data, and search for regularity or trends. Younger students might rely on using concrete objects or pictures to help conceptualize and relationships, graph data, and search for

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



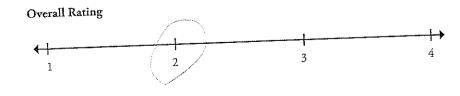
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Title of Instructional Materials:	

2. Reason abstractly and quantitatively.

Mathematically proficient students make sense of quantities and their relationships in problem situations. They bring two complementary abilities to bear on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate on problems involving quantitative relationships: the ability to decontextualize—to abstract a given situation and represent it symbolically and manipulate the representing symbols as if they have a life of their own, without necessarily attending to their referents—and the ability to contextualize, to pause as needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a needed during the manipulation process in order to probe into the referents for the symbols involved. Quantitative reasoning entails habits of creating a needed during the manipulation of the problem at hand; considering the units involved; attending to the meaning of quantities, not just how to compute them; and knowing and flexibly using different properties of operations and objects.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



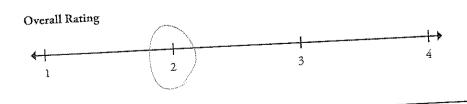
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Title of Instructional Materials:	

3. Construct viable arguments and critique the reasoning of others.

Mathematically proficient students understand and use stated assumptions, definitions, and previously established results in constructing arguments. They make conjectures and build a logical progression of statements to explore the truth of their conjectures. They are able to analyze situations by breaking them into cases, and can recognize and use counterexamples. They justify their conclusions, communicate them to others, and respond to the arguments of others. They reason inductively about data, making plausible arguments that take into account the context from which the data arose. Mathematically proficient students are also able to compare the effectiveness of two plausible arguments, distinguish correct logic or reasoning from that which is flawed, and—if there is a flaw in an argument—explain what it is. Elementary students can construct arguments using concrete referents such as objects, drawings, diagrams, and actions. Such arguments can make sense and be correct, even though they are not generalized or made formal until later grades. Later, students learn to determine domains to which an argument applies. Students at all grades can listen or read the arguments of others, decide whether they make sense, and ask useful questions to clarify or improve the arguments.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



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Title of Instructional Materials:	

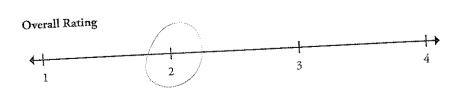
4. Model with mathematics.

Mathematically proficient students can apply the mathematics they know to solve problems arising in everyday life, society, and the workplace. In early grades, this might be as simple as writing an addition equation to describe a situation. In middle grades, a student might apply proportional reasoning to plan a school event or analyze a problem in the community. By high school, a student might use geometry to solve a design problem or use a function to describe how one quantity of interest depends on another. Mathematically proficient students who can apply what they know are comfortable making assumptions and approximations to simplify a complicated situation, realizing that these may need revision later. They are able to identify important quantities in a practical situation and map their relationships using such tools as diagrams, two-way tables, graphs, flowcharts and formulas. They can analyze those relationships mathematically to draw conclusions. They routinely interpret their mathematical results in the context of the situation and reflect on whether the results make sense, possibly improving the model if it has not served its purpose.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):

Summary/Justification/Evidence



The Charles A. Dana Center

Reviewed By:	
Title of Instructional Materials:	

5. Use appropriate tools strategically.

Mathematically proficient students consider the available tools when solving a mathematical problem. These tools might include pencil and paper, concrete models, a ruler, a protractor, a calculator, a spreadsheet, a computer algebra system, a statistical package, or dynamic geometry software. Proficient students are sufficiently familiar with tools appropriate for their grade or course to make sound decisions about when each of these tools might be helpful, recognizing both the insight to be gained and their limitations. For example, mathematically proficient high school students analyze graphs of functions and solutions generated using a graphing calculator. They detect possible errors by strategically using estimation and other mathematical knowledge. When making mathematical models, they know that technology can enable them to visualize the results of varying assumptions, explore consequences, and compare predictions with data. Mathematically proficient students at various grade levels are able to identify relevant external mathematical resources, such as digital content located on a website, and use them to pose or solve problems. They are able to use technological tools to explore and deepen their understanding of concepts.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



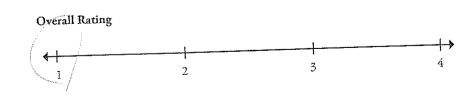
Reviewed By:	
Title of Instructional Materials:	

6. Attend to precision.

Mathematically proficient students try to communicate precisely to others. They try to use clear definitions in discussion with others and in their own reasoning. They state the meaning of the symbols they choose, including using the equal sign consistently and appropriately. They are careful about specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, specifying units of measure, and labeling axes to clarify the correspondence with quantities in a problem. They calculate accurately and efficiently, express numerical answers with a degree of precision appropriate for the problem context. In the elementary grades, students give carefully formulated explanations to each other. By the time they reach high school they have learned to examine claims and make explicit use of definitions.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



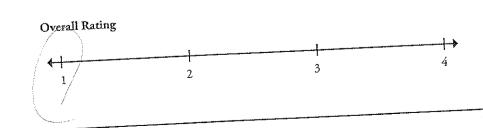
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Title of Instructional Materials:	

7. Look for and make use of structure.

Mathematically proficient students look closely to discern a pattern or structure. Young students, for example, might notice that three and seven more is the same amount as seven and three more, or they may sort a collection of shapes according to how many sides the shapes have. Later, students will see 7×8 equals the well remembered $7 \times 5 + 7 \times 3$, in preparation for learning about the distributive property. In the expression $x^2 + 9x + 14$, older students can see the 14 as 2×7 and the 9 as 2 + 7. They recognize the significance of an existing line in a geometric figure and can use the strategy of drawing an auxiliary line for solving problems. They also can step back for an overview and shift perspective. They can see complicated things, such as some algebraic expressions, as single objects or as being composed of several objects. For example, they can see $5 - 3(x - y)^2$ as 5 minus a positive number times a square and use that to realize that its value cannot be more than 5 for any real numbers x and y.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



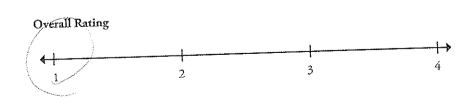
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Title of Instructional Materials:	

8. Look for and express regularity in repeated reasoning.

Mathematically proficient students notice if calculations are repeated, and look both for general methods and for shortcuts. Upper elementary students might notice when dividing 25 by 11 that they are repeating the same calculations over and over again, and conclude they have a repeating decimal. By paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1,2) with slope 3, middle school students might paying attention to the calculation of slope as they repeatedly check whether points are on the line through (1,2) with slope 3, middle school students might abstract the equation (y-2)/(x-1) = 3. Noticing the regularity in the way terms cancel when expanding (x-1)(x+1), $(x-1)(x^2+x+1)$, and $(x-1)(x^3+x^2+x+1)$ might lead them to the general formula for the sum of a geometric series. As they work to solve a problem, mathematically proficient students maintain oversight of the process, while attending to the details. They continually evaluate the reasonableness of their intermediate results.

Indicate the chapter(s), section(s), or page(s) reviewed.

Portions of the mathematical practice that are missing or not well developed in the instructional materials (if any):



Reviewed By:

Title of Instructional Materials:

MATHEMATICS: GRADE 8 - THE NUMBER SYSTEM - 8.NS Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials. Know that there are numbers that are not rational, and approximate them by rational numbers. Important Mathematical Ideas Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeats eventually, and convert a decimal expansion which repeats eventually into a rational number. Skills and Procedures Mathematical Relationships Summary / Justification / Evidence Indicate the chapter(s), section(s), and/or page(s) reviewed. Portions of the domain, cluster, and standard that are missing or not well LforP: 4 developed in the instructional materials (if any): Overall Rating

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - THE NUMBER SYSTEM - 8.NS

Know that there are numbers that are not rational, and approximate	Summary and documentation met. Cite examples from the	on of how the domain, cluster, and standard are materials.
them by rational numbers. 8.NS.2 Use rational approximations of irrational numbers to compare the size of the compare the co	Important Mathematical Ideas	1 2 3 4
rrational numbers, locate them approximately of a futilist the value of expressions (e.g., π^2). For example, by truncating and estimate the value of expressions (e.g., π^2). For example, by truncating the decimal expansion of $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between the decimal expansion for $\sqrt{2}$, show that $\sqrt{2}$ is between 1 and 2, then between 1.4 and 1.5, and explain how to continue on to get better approximations.	Skills and Procedures	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	Mathematical Relationships	1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / I	Evidence
	Portions of the domain, cl developed in the instructi	luster, and standard that are missing or not well ional materials (if any):
	Overall Rating	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$

Reviewed By:	
Title of Instructional Materials:	

ATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.E	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.		
Vork with radicals and integer exponents.			
E.EE.1 Know and apply the properties of integer exponents to generate equivalent numerical expressions. For example, $3^2 \times 3^{-5} = 3^{-3} = 1/3^3 = 1/27$.	Important Mathematical Ideas 1 2 3 4		
	Skills and Procedures 1 2 3 4		
	Mathematical Relationships 1 2 3		
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not we developed in the instructional materials (if any): Overall Rating		

Reviewed By:

Title of Instructional Materials:

MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8.EE

ork with radicals and integer exponents.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
Jee square root and cube root symbols to represent solutions to equations	Important Mathematical Ideas 1 2 3 4
ise square root and cube root symbols to represent solutions to equate f the form $x^2 = p$ and $x^3 = p$ where p is a positive rational number. Evaluate quare roots of small perfect squares and cube roots of small perfect cubes. (now that $\sqrt{2}$ is irrational.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 1 2 3 4

The Charles A. Dana Center

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Reviewed By:	
Title of Instructional Materials:	

Summary and documentation met. Cite examples from the	on of how materials	the domain, cluste	er, and stand	aru are
Important Mathematical Ideas	← 1	1 2	3	4
Skills and Procedures	(1	2	[3	 1
Mathematical Relationships	1	2	3	
Summary / Justification / E	Evidence			
Portions of the domain, cl developed in the instructi	uster, and onal mate	standard that are rials (if any):	missing or	not well
Overall Rating			3	
	Important Mathematical Ideas Skills and Procedures Mathematical Relationships Summary / Justification / Ideas Portions of the domain, cludeveloped in the instruction	met. Cite examples from the materials Important Mathematical Ideas 1 Skills and Procedures 1 Mathematical Relationships 1 Summary / Justification / Evidence Portions of the domain, cluster, and developed in the instructional mate	met. Cite examples from the materials. Important Mathematical Ideas 1 2 Skills and Procedures 1 2 Mathematical Relationships 1 2 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are developed in the instructional materials (if any):	Important Mathematical Ideas 1 2 3 Skills and Procedures 1 2 3 Mathematical Relationships 1 2 3 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing of ideveloped in the instructional materials (if any):

Reviewed By:	
Title of Instructional Materials:	

Nork with radicals and integer exponents.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
3.EE.4 Perform operations with numbers expressed in scientific notation, including	Important Mathematical Ideas 1 2 3 4
problems where both decimal and scientific notation are some problems where both decimal and scientific notation and choose units of appropriate size for measurements of very large or very small quantities (e.g., use millimeters per year for seafloor spreading). Interpret scientific notation that has been generated by technology.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

Reviewed By:

Title of Instructional Materials:

nderstand the connections between proportional relationships, lines,	Summary and documentation met. Cite examples from the	on of how the community materials.	lomain, cluste	r, and standar	
nderstand the confections seemed in the confections and linear equations.		July 1		1	
.EE.5 Graph proportional relationships, interpreting the unit rate as the slope of	Important Mathematical Ideas		2	3	4
raph proportional relationships, interpreting the unit rate us to the represented in the graph. Compare two different proportional relationships represented in the graph. Compare a distance-time graph to a distance-tifferent ways. For example, compare a distance-time graph to a distance-tifferent ways. For example, compare a distance-time graph to a distance-time graph gr	Skills and Procedures	1	2	3	4
	Mathematical Relationships		2	3	 -
	Summary / Justification /	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, c developed in the instruct	luster, and sta ional materials	ndard that are	missing or n	ot well
	Overall Rating			3	4

Title of Instructional Materials:

MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8.EE

Inderstand the connections between proportional relationships, lines,	Summary and documentation of how the domain, cluster, and star met. Cite examples from the materials.	
nd linear equations.	and the street Ideas	
Jee similar triangles to explain why the slope m is the same between any we distinct points on a non-vertical line in the coordinate plane; derive the equation $y = mx$ for a line through the origin and the equation $y = mx + b$ for equation $y = mx$ for a line through the origin and the equation $y = mx + b$.	Important Mathematical Ideas 1 2 3	4
equation $y = mx$ for a line through the original axis at b .	Skills and Procedures 2 3	4
	Mathematical Relationships 1 2 3	4
	Summary / Justification / Evidence	
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cluster, and standard that are missing developed in the instructional materials (if any):	or not well
	Overall Rating 1 1 1 2 3	

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Reviewed By:	
Title of Instructional Materials:	

analyze and solve linear equations and pairs of simultaneous linear	Summary and documentation of how the domain, cluster, and standard a met. Cite examples from the materials.
quations.	Important Mathematical Ideas
EE.7a	Important Mathematical rusus
Solve linear equations in one variable.	\
 a. Give examples of linear equations in one variable with one solution, infinitely many solutions, or no solutions. Show which of these possibilities is the case by successively transforming the given equation into simpler forms, until an equivalent equation of the form x = a, a = a, or a = b results (where a and b are different numbers). 	Skills and Procedures 2 3
	Mathematical Relationships 1 2 3
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	in a most w
Trans Kit	Portions of the domain, cluster, and standard that are missing or not we developed in the instructional materials (if any):
Trans	Overall Rating 1 2 3

Reviewed By;	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - EXPRESSIONS AND EQUATIONS - 8.EE

IATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.E Analyze and solve linear equations and pairs of simultaneous linear	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.				
Reguations. 3.EE.7b 3.EE.7b one variable.	Important Mathematical Ideas		2	3	4
Solve linear equations with rational number coefficients, including equations whose solutions require expanding expressions using the distributive property and collecting like terms.	Skills and Procedures		2	3	 → 4
	Mathematical Relationships	1	2	3	4
	Summary / Justification /	Evidence			
	Portions of the domain, of developed in the instruct	luster, and sta ional material	andard that ar s (if any):	e missing or r	iot well
	Overall Rating	(H)	2	3	4

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Reviewed By: Title of Instructional Materials:

1ATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.Et	Summary and documentatio met. Cite examples from the	n of how the domain, cluster, and standard are materials.
equations. 8.EE.8a	Important Mathematical Ideas	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
 Analyze and solve pairs of distributions. Understand that solutions to a system of two linear equations in two variables correspond to points of intersection of their graphs, because points of intersection satisfy both equations simultaneously. 	Skills and Procedures	$\begin{array}{c ccccccccccccccccccccccccccccccccccc$
	Mathematical Relationships	1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, of developed in the instruct	oluster, and standard that are missing or not well
	Overall Rating	1 2 3 4

Reviewed By:	
Title of Instructional Materials:	

Analyze and solve linear equations and pairs of simultaneous linear equations.	Summary and documentation met. Cite examples from the	on of how the materials.	e domain, cius	Ster, and standar	
 8. Analyze and solve pairs of simultaneous linear equations. b. Solve systems of two linear equations in two variables algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. For example, 3x + 2y = 5 and 3x + 2y = 6 have no solution because 3x + 2y cannot simultaneously be 5 and 6. M. M. M	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	1	2	3)	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or not we developed in the instructional materials (if any):				
	Overall Rating		2	3	— → 4

Reviewed By:	
Title of Instructional Materials:	

ATHEMATICS: GRADE 8 – EXPRESSIONS AND EQUATIONS – 8.E	Summary and documentation met. Cite examples from the	n of how th materials.	e domain, v		
quations.	Important Mathematical Ideas	($\frac{1}{2}$	3	4
 a. Analyze and solve pairs of simultaneous linear equations. b. Solve real-world and mathematical problems leading to two linear equations in two variables. For example, given coordinates for two pairs of points, determine whether the line through the first pair of points intersects the line through the second pair. 	Skills and Procedures	1	1/2	3	 → 4
	Mathematical Relationships	1	/2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, of developed in the instruction	luctor and	standard that ar	e missing or	not well
	Overall Rating	4 	2	3	 4

Reviewed By:	
Title of Instructional Materials:	

ATHEMATICS: GRADE 8 – FUNCTIONS – 8.F	Summary and documentatio met. Cite examples from the	n of how the omaterials.	domain, ciust		
efine, evaluate, and compare functions.					
8.F.1 Understand that a function is a rule that assigns to each input exactly one output. The graph of a function is the set of ordered pairs consisting of an input and the corresponding output. 1	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures		2	3	4
	Mathematical Relationships	1)	2	3	4
	Summary / Justification /	Evidence			
1 Function notation is not required in Grade 8. Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, of developed in the instruct	luster, and st ional materia	andard that a Is (if any):	re missing or	not well
	Overall Rating	(+) 1	2	3	4

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F

Define, evaluate, and compare functions.	Summary and documentation met. Cite examples from the	on of how the comments.	iomain, ciust	er, and startes	
8.F.2 Compare properties of two functions each represented in a different way (algebraically, graphically, numerically in tables, or by verbal descriptions). For example, given a linear function represented by a table of values and	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	(1)	2	3	
	Mathematical Relationships		2	3	
	Summary / Justification /	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, of developed in the instruct	luster, and sta ional materials	ndard that are	e missing or n	ot well
GGG 1	Overall Rating	(1)	2	3	

Reviewed By:	
Title of Instructional Materials:	

Define, evaluate, and compare functions.	Summary and documentatio met. Cite examples from the	n of how the c materials.	lomain, cius	iei, and startau.	
8.F.3 Interpret the equation $y = mx + b$ as defining a linear function, whose graph is a straight line; give examples of functions that are not linear. For example, the function $A = s^2$ giving the area of a square as a function of its side length is not linear because its graph contains the points $(1,1)$, $(2,4)$ and $(3,9)$, which are not on a straight line.	Important Mathematical Ideas	1	2	3	
	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / I	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, c developed in the instructi	luster, and sta ional materials	ndard that a (if any):	re missing or n	ot well
TWMM: 3,3 GGG: 5 TS GGA: 3,4 3+3/S: 4	Overall Rating	+	2	1	

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F

Use functions to model relationships between quantities.	Summary and documentation met. Cite examples from the	on of how materials	the domain, cluste s.	r, and stand	aru aie
3.F.4	Important Mathematical Ideas	 	$\frac{1}{2}$	3	
construct a function to model a linear relationship between two quantities. Determine the rate of change and initial value of the function from a lescription of a relationship or from two (x, y) values, including reading the rom a table or from a graph. Interpret the rate of change and initial value of a linear function in terms of the situation it models, and in terms of its graper a table of values.	Skills and Procedures	1	2	3	 →
	Mathematical Relationships	∢ −− 1	2	3	4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Found)				
TWMM: 1,2 TS&A: 3,4	Portions of the domain, cludeveloped in the instruction	uster, and onal mate	I standard that are rials (if any):	missing or n	ot well
SH W SI 4					
	Overall Rating	←	2	3	4

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 - FUNCTIONS - 8.F

lse functions to model relationships between quantities.	Summary and documentation met. Cite examples from the	on of how the domain, cluster, and standard are materials.
8.F.5 Describe qualitatively the functional relationship between two quantities by analyzing a graph (e.g., where the function is increasing or decreasing, linear or nonlinear). Sketch a graph that exhibits the qualitative features of a function that has been described verbally.	Important Mathematical Ideas	1 2 3 4
	Skills and Procedures	1 2 3 4
	Mathematical Relationships	1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / I	Evidence
	developed in the instruct	luster, and standard that are missing or not well ional materials (if any):
	Overall Rating	1 2 3 4

Reviewed By:	
Title of Instructional Materials:	

Inderstand congruence and similarity using physical models, ransparencies, or geometry software.	Summary and documentation met. Cite examples from the	materials.	e uomam, ordos		<u></u>
8.G.1a 1. Verify experimentally the properties of rotations, reflections, and translations: a. Lines are taken to lines, and line segments to line segments of the same length.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
	Summary / Justification / I	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, c developed in the instruction	luster, and signal materi	standard that are als (if any):	e missing or no	ot well
	Overall Rating	1		3	4

Reviewed By:	
Title of Instructional Materials:	

MATHEMATICS: GRADE 8 – GEOMETRY – 8.G	Summary and documentation of how the domain, cluster, and standard are
the arrange and similarity using physical models,	Summary and documentation of now the domination of now the documentation of now the documentatio
Understand congruence that transparencies, or geometry software. 8.G.1b 1. Verify experimentally the properties of rotations, reflections, and	Important Mathematical Ideas 1 2 3 4
translations: b. Angles are taken to angles of the same measure.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation met. Cite examples from the	on of how material	the domain, clus	ter, and stand	iard are
8.G.1c1. Verify experimentally the properties of rotations, reflections, and translations:	Important Mathematical Ideas	1	1 2	3	
c. Parallel lines are taken to parallel lines.	Skills and Procedures	(1 2	3	 -
	Mathematical Relationships	← 1	2	3	
	Summary / Justification / E	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
	Portions of the domain, cludeveloped in the instruction	onal mate	standard that are		
	Overall Rating	 	1 2	3	1→ 4

Reviewed By:	
Title of Instructional Materials:	

ATHEMATICS: GRADE 8 - GEOMETRY - 8.G	Summary and documentation	n of how th	e domain, cluster	, and statida	iu aic
nderstand congruence and similarity using physical models, ansparencies, or geometry software.	met. Cite examples from the	materials.			
8.G.2	Important Mathematical Ideas	1	2	3	4
nderstand that a two-dimensional figure is congruent to another anothe	Skills and Procedures	1		3	
	Mathematical Relationships	1	(2)	3	4
	Summary / Justification /	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, of developed in the instruct	luster, and ional mater	standard that are rials (if any):	missing or r	not well
	Overall Rating			3	

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentation met. Cite examples from the			ster, and stand	dard are
8.G.3 Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures using coordinates.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	1	2	3	
	Mathematical Relationships	1	2	3	 → 4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.	**************************************				
KH+m: 2,5	Portions of the domain, cludeveloped in the instruction	nal materia	ds (if any):		
	Overall Rating	1	1 2	3	4

Reviewed By:	
Title of Instructional Materials:	

Inderstand congruence and similarity using physical models, ransparencies, or geometry software.	Summary and documentat met. Cite examples from the	ion of how the ne materials.	domain, clus	ter, and standa	aru are
Understand that a two-dimensional figure is similar to another if the second	Important Mathematical Ideas		2	3	
can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them.	Skills and Procedures	1	2	3	—— → 4
	Mathematical Relationships			3	4
	Summary / Justification /	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					- 4 I f
Tarstit	Portions of the domain, of developed in the instruct	cluster, and sta cional materials	andard that ar	e missing or n	ot weii
-	Overall Rating		2		

Reviewed By:	
Title of Instructional Materials:	

Understand congruence and similarity using physical models, transparencies, or geometry software.	Summary and documentat met. Cite examples from the	tion of how the ne materials.	domain, clus	er, and Statica	aru are
8.G.5 Use informal arguments to establish facts about the angle sum and exterior	Important Mathematical Ideas		2	3	
angle of triangles, about the angles created when parallel lines are cut by a transversal, and the angle-angle criterion for similarity of triangles. For example, arrange three copies of the same triangle so that the sum of the three angles appears to form a line, and give an argument in terms of transversals why this is so.	Skills and Procedures		2	3	
	Mathematical Relationships		2	3	4
	Summary / Justification /	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.				- Contraction of the Contraction	
Tans Lit	Portions of the domain, of developed in the instruction	cluster, and sta tional materials	andard that are s (if any):	e missing/or n	ot well
	Overall Rating	/ 	2	3	

R	Reviewed By:	
7	Fitle of Instructional Materials	

ATHEMATICS: GRADE 8 – GEOMETRY – 8.G	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
Inderstand and apply the Pythagorean Theorem.	met. Cite examples nom an
3. G.6 Explain a proof of the Pythagorean Theorem and its converse.	Important Mathematical Ideas 1 2 3 4
	Skills and Procedures 1 2 3
	Mathematical Relationships 1 2 3
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or not we developed in the instructional materials (if any):
	Overall Rating

Reviewed By:

Title of Instructional Materials:

Inderstand and apply the Pythagorean Theorem.	Summary and documentation met. Cite examples from the	materials.	e domain, cius	ico, and comme
S.G.7 Apply the Pythagorean Theorem to determine unknown side lengths in right triangles in real-world and mathematical problems in two and three	Important Mathematical Ideas	1	2	3 4
dimensions.	Skills and Procedures	1	2	3 4
	Mathematical Relationships	← 1	2	3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, of developed in the instruction	Juster and s	standard that a als (if any):	re missing or not well
	Overall Rating	 	2	

Reviewed By:	

Title of Instructional Materials:

Understand and apply the Pythagorean Theorem.	Summary and documentation met. Cite examples from the	n of how th materials.	e domain, ciu	stel, and standar	
8.G.8 Apply the Pythagorean Theorem to find the distance between two points in a coordinate system.	Important Mathematical Ideas	1	2	3	
	Skills and Procedures	1	2	3	4
	Mathematical Relationships	1	2	3	4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Portions of the domain, cl developed in the instructi	uster, and s	tandard that als (if any):	are missing or no	t well
	Overall Rating	 	2	1 3	 → 4

Reviewed By:	
Title of Instructional Materials:	

Solve real-world and mathematical problems involving volume of cylinders, cones, and spheres.	Summary and documentation met. Cite examples from the	n of how the domaterials.	omain, cluster	, and Stallda	
R.G.9 Know the formulas for the volumes of cones, cylinders, and spheres and use them to solve real-world and mathematical problems.	Important Mathematical Ideas	1	2	3	4
	Skills and Procedures	1	2	3	 - }
	Mathematical Relationships	1	(2)	3	4
	Summary / Justification / E	Evidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.					
KH+M: 1,2	Portions of the domain, cl developed in the instruction	anai materiais i	ii dily j.		ot Meii
KH+M: 1,2 LBVP: 3,4 Sitw/S: 1,3,4	Wo Volum	e Goy	SpW.		
	Overall Rating	1	1 2	3	4

Reviewed By:	
Title of Instructional Materials:	

tion in hivariate data.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
S.SP.1 Construct and interpret scatter plots for bivariate measurement data to nvestigate patterns of association between two quantities. Describe nvestigate patterns of association between two quantities association, linear	Important Mathematical Ideas 1 2 3 4
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
	Overall Rating 1 2 3 4

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Reviewed By:	
Title of Instructional Materials:	

Summary and documentation met. Cite examples from the	n of how materials	the domain, cluste i.	r, and standa	ird are
Important Mathematical Ideas	1	1	3	4
Skills and Procedures	∢ 	1 2	3	 → 4
Mathematical Relationships	< −−− 1	2	3	4
Summary / Justification / E	Evidence			
Portions of the domain, cludeveloped in the instruction	uster, and onal mate	standard that are	missing or n	ot well
Overall Rating	← 1	1 2	3	 → 4
	Important Mathematical Ideas Skills and Procedures Mathematical Relationships Summary / Justification / E Portions of the domain, cl developed in the instruction	Important Mathematical Ideas Important Mathematical Ideas I Skills and Procedures I Mathematical Relationships I Summary / Justification / Evidence Portions of the domain, cluster, and developed in the instructional materials	met. Cite examples from the materials. Important Mathematical Ideas 1 2 Skills and Procedures 1 2 Mathematical Relationships 1 2 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are developed in the instructional materials (if any): Overall Rating	Important Mathematical Ideas 1 2 3 Skills and Procedures 1 2 3 Mathematical Relationships 1 2 3 Summary / Justification / Evidence Portions of the domain, cluster, and standard that are missing or no developed in the instructional materials (if any):

Reviewed By:	
Title of Instructional Materials:	

Investigate patterns of association in bivariate data.	Summary and documentation of how the domain, cluster, and standard are met. Cite examples from the materials.
8.SP.3 Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. For example, in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.	Important Mathematical Ideas 1 2 3 4
	Skills and Procedures 1 2 3 4
	Mathematical Relationships 1 2 3 4
	Summary / Justification / Evidence
Indicate the chapter(s), section(s), and/or page(s) reviewed.	Found
TS of A : 2,3	Portions of the domain, cluster, and standard that are missing or not well developed in the instructional materials (if any):
TS of A : 2,3 2-	
	Overall Rating

Reviewed By:	
Title of Instructional Materials:	

Investigate patterns of association in bivariate data.	Summary and documentati met. Cite examples from the		domain, clus	ster, and stand	lard are
8.SP.4	Important Mathematical Ideas				
Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative		1	2	3	4
frequencies calculated for rows or columns to describe possible association between the two variables. For example, collect data from students in your	Skills and Procedures	A			
class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?		1	2	3	4
	Mathematical Relationships		2	3	4
	Summary / Justification / E	vidence			
Indicate the chapter(s), section(s), and/or page(s) reviewed.				and the state of t	
Transkit	Portions of the domain, cludeveloped in the instruction			missing or n	ot well
	O			•	
	Overall Rating	1	2	3	4

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Grade 8

Connected Mathematics 2-2009 (8 Topics: A TE for each): Connected Mathematics 2, CC Unit 2012

	MATHEMATICAL PRACTICES	Chapter/Section/Page				Justification/Evid	pieces of Math	Overall Rating
	1. Make sense of problems and persevere in solving them.	Yes, as explained in Rev	viewers' Guide		A	Promised but no	3	
	2. Reason abstractly and quantitatively.	Vos. as explained in Poviouers' Guide				time to prove it examples were	3	
	3. Construct viable arguments and critique the reasoning of	Yes, as explained in Rev	viewers' Guide	!		Reviewers Guid	3	
	4. Model with mathematics.	Yes, as explained in Rev	viewers' Guide			more time, thes	3	
	5. Use appropriate tools strategically.	Yes, as explained in Rev	viewers' Guide	•		verified. They doubt and would	3	
	6. Attend to precision.	Yes, as explained in Rev	viewers' Guide)		reinterpreted.	nave to be	3
	7. Look for and make use of structure.	Yes, as explained in Rev	viewers' Guide	•				3
	8. Look for and express regularity in repeated reasoning.	Yes, as explained in Rev	viewers' Guide	2				3
8.NS	THE NUMBER SYSTEM	Chapter/Section/Page	Important Math Ideas	Skills and Procedures	Math Relationships		Missing portions of Standards	Overall Rating
	Know that there are numbers that are not rational, and approximate them by rational numbers.				·			
8.NS.1	Know that numbers that are not rational are called irrational. Understand informally that every number has a decimal expansion; for rational numbers show that the decimal expansion repeates eventually, and convert a decimal expansion which repeats eventually into a rational number.							
8.NS.2	Use rational approximations of irrational numbers to compare the size of irrational numbers, locate them approximately on a number line diagram, and estimate the value of expressions				standards and probably not A CC Transition	book was written d much of the mate be mentioned in the on Kit will be availal w.PearsonSuccessN	erial in the boo ne Correleatio ble in the Spri	ok will n Charts.
8.EE	EXPRESSIONS AND EQUATIONS							
	Work with radicals and integer exponents.							
8.EE.1	Know and apply the properties of integer exponents to generate equivalent numberical expressions.							

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Grade 8

Connected Mathematics 2-2009 (8 Topics: A TE for each): Connected Mathematics 2, CC Unit 2012

8.EE.2	Use square root and cube root symbols to represent solutions to				-			
	equations of the form $x^2 = p$, where p is a positive rational							
	number. Evaluate square roots of small perfect squares and cube			:				
	roots of small perfect cubes. Know that square root of 2 is			:				
	irrational.			:				
8.EE.3	Use numbers expressed in the form of a single digit times an			:	100000011000011000110001000000000000000			
	integer power of 10 to estimate very large or very small							
	quantities, and to express how many times as much one is than							
	the other.							
8.EE.4	Perform operations with numbers expressed in scientific					,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		
	notation, including problems where both decimal and scientific		:					
	notation are used. Use scientific notation and choose units of							
	appropriate size for measurements of very large or very small							
	quantities. Interpret scientific notation that has been generated			:	:			
	by technology.	:		:				:
.,,		·		:				
	Understand the connections between proportional							
	relationships, lines, and linear equations.							
8.EE.5	Graph proportional relationships, interpreting the unit rate as							
	the slope of the graph. Compare two different proportional							
	relationships represented in different ways. Ex: compare a distance-	:					!	
	time graph to a distance-time equations to determine which of two moving							
	objects has greater speed.							
8.EE.6	Use similar triangles to explain why the slope m is the same		· · · · · · · · · · · · · · · · · · ·					<u>:</u>
	between any two distinct points on a non-vertical line in the							
	coordinate plane; derive the equation <i>y=mx</i> for a line through							
	the origin and the equation $y=mx+b$ for a line intercepting the							
	vertical axis at b.			:				
	Analyze and solve linear equations and pairs of simultaneous					V 1 100 11 11 11 11 11 11 11 11 11 11 11		
	linear equations.							
····								

Connected Mathematics 2-2009 (8 Topics: A TE for each):

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Grade 8

Connected Mathematics 2, CC Unit 2012

8.EE.7a	Solve linear equations in one variable.		:				
	A. Give examples of linear equations in one variable with one	:					
	solution, infinitely many solutions, or no solutions. Show which		:				
	of these possibilities is the case by successively transforming the		:				
	given equation into simpler forms, until an equivalent equation						
	of the form x = a, a = a, or a = b results (where a and be are				:		
	different numbers).				:		Accountable
					······		
8.EE.7b	Solve linear equations in one variable.						
	B. Solve linear equations with rational number coefficients,		:				
-	including equations whose solutions require expanding						
	expressions using the distributive property and collecting like			:	:		
	terms.			:			
8.EE.8a	Analyze and solve pairs of simultaneous linear equations.						:
1	A. Understand that solutions to a system of two linear equations		:				
	in two variables correspond to points of intersection of their		:	:			
	graphs, because points of intersection satisfy both equations						
	simultaneously.			:			
o er ob	Analysis and advantage of circulton cover linear equations						
8.EE.8b	Analyze and solve pairs of simultaneous linear equations.		:				
	B. Solve systems of two linear equations in two variables	:					
	algebraically, and estimate solutions by graphing the equations. Solve simple cases by inspection. Ex: $3x + 2y = 5$ and $3x + 2y = 6$						
	•						
	have no solution because 3x + 26 cannot simultaneously be 5 and 6.						
	0.						
8.EE.8c	Analyze and solve pairs of simultaneous linear equations.				11000 CCC00001 11000011 11000010010010000110 FO110001	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
0.66.00	C. Solve real-world and mathematical problems leading to two	:	:				
	linear equations in two variables. Ex: Given coordinates for two pairs of						
***************************************	points, determine whether the line through the first pair of points intersects the						
	line through the second pair.				:		
	EUNCTIONS						 ***************************************
	Define, evaluate, and compare functions.						

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0.54		:					:	:
8.F.1	Understand that a function is a rule that assigns to each input							
	exactly one output. The graph of a function is the set of ordered							
	pairs consisting of an input and the corresponding output. (Note:							
	Function notation is not required in 8th grade.)							
8.F.2	Compare properties of two functions each represented in a			1000	i		<u></u>	
	different way (aggebraically, graphically, numerically in tables, or							
	by verbal descriptions). Ex: Given a linear function represented by a table of						1	
	values and a linear function represented by an algebralic expression, determine							
	which function has the areater rate of chanae.		,,,,,	FO. 400 & \$ \$000 E \$1.00 FOR \$1.00 F		***************************************		:
8.F.3	Interpret the equation y = mx + b as defining a linear function,				:			
	whose graph is a straight line; give examples of functions that are							
	not linear. Ex: The function $A = s^2$ giving the area of a square as a function of							
	its side length is not linear because its graph contains the points (1,1), (2,4) and							
	(3,9) which are not on a straight line.							
				; 				
	Use functions to model relationships between quantitites.					} :	; -i	
8.F.4	Construct a function to model a linear relationship between two							
	quantities. Determine the reate of change and intial value of the							
	function from a description of a relationship or from two (x,y)							
	values, including reading these from a table or from a graph.	:						
	Interpret the rate of change and initial value of a linear function					: : 1		
0.5.5	in terms of the situation it models, and in terms of its graph or a Describe qualitatively the functional releationship between two			<u>:</u>			:	
8.F.5		:						
	quantities by analyzing a graph (e.g., where the function is							
	increasing or decreasing, linear or nonlinear). Sketch a graph that							
	exhibits the qualitative features of a function that has been			Ĺ			:	
	described verbally.			•				
				· .	:	· 		<u>:</u>
	GEOMETRY						1	
	Understand congruence and similarity using physical models,							
	transparencies, or geometry software.		······	:				
8.G.1a	Verify experimentally the properties of rotations, reflections, and	;						
	translations:							
	a. Lines are taken to lines, and the line segments to line segments							
	of the same length.						<u>.</u>	
8.G.1b	Verify experimentally the properties of rotations, reflections, and							
	translations:							
	b. Angles are taken to angles of the same measure.				:			:

Connected Mathematics 2-2009 (8 Topics: A TE for each):

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Connected Mathematics 2, CC Unit 2012

translations: c. Parallel lines are taken to parallel lines. conductions, reflections, and translations; given two congruent figures, describe a sequence that exhibits the congruence between them. 8.G.3 Describe the effect of dilations, translations, rotations, and reflections on two-dimensional figures is similar to another if the second can be obtained from the first by a sequence of rotations, reflections, translations, and dilations; given two similar two-dimensional figures, describe a sequence that exhibits the similarity between them. 8.G.5 Use informal arguments to establish facts about the angle sum and exterior angle of triangles, about the angle-angle criterion for similarity of triangles. Ex: Arrange three copies of the same triangles or that the sum of the three angles appears to form a line, and give an orgument in terms of transpersals why this is so. Understand and apply the Pythagorean Theorem. 8.G.6 Explain a proof of the Pythagorean Theorem and its converse.	T		:	 			:	:
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Grade 8

Connected Mathematics 2, CC Unit 2012

Connected Mathematics 2-2009 (8 Topics: A TE for each):

8.SP.1	Construct and interpret scatter plots for bivariate measurements data to investigate patterns of association between two quantities. Describe patterns such as clustering, outliers, positive or negative association, linear association, and nonlinear association.				
8.SP.2	Know that straight lines are widely used to model relationsips between two quantitative variables. For scatter plots that suggest a linear association, informally fit a straight line, and informally assess the model fit by judging the closeness of the data points to the line.				
8.SP.3	Use the equation of a linear model to solve problems in the context of bivariate measurement data, interpreting the slope and intercept. Ex: in a linear model for a biology experiment, interpret a slope of 1.5 cm/hr as meaning that an additional hour of sunlight each day is associated with an additional 1.5 cm in mature plant height.				
8.SP.4	Understand that patterns of association can also be seen in bivariate categorical data by displaying frequencies and relative frequencies in a two-way table. Construct and interpret a two-way table summarizing data on two categorical variables collected from the same subjects. Use relative frequencies calculated for rows or colums to describe possible association between the two variables. Ex: Collect data from students in your class on whether or not they have a curfew on school nights and whether or not they have assigned chores at home. Is there evidence that those who have a curfew also tend to have chores?				